

Notice of Allowability

Application No.

10/691,818

Examiner

Tamai I.E. Karl

Applicant(s)

IONEL ET AL.

Art Unit

2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 3/21/2006.
2. ☒ The allowed claim(s) is/are 1-15, 17-20, 22-31, 33-39, 43, 44, 47, 50, 52, 54, 56-70.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

KARL TAMAI
PRIMARY EXAMINER

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date 2/12/06
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

Tamai I.E. Karl
Primary Examiner
Art Unit: 2834

Drawings

The drawings were received on 3/21/2006. These drawings are acceptable. The prior objections to the drawings are withdrawn.

Reasons for Allowance

The following is an examiner's statement of reasons for allowance: the prior art does not teach a spoke permanent magnet rotor assembly for a motor having a single body of permanent magnet material continuously surrounding the axis of rotation to define a circumferential portion with a first interface surface and continuously radially extending outwardly relative to the axis of rotation to form a plurality of outwardly extending portions. The rotor assembly including ferromagnetic material positioned adjacent the outwardly extending portions of permanent magnet material and including an outer surface and a second interface surface which is inward of the outer surface and engages the first interface surface, where the first and second interface surfaces are arranged to inhibit the outward radial movement of the ferromagnetic material.

The prior art does not teach a permanent magnet rotor assembly for a motor having a shaft supporting a permanent magnet rotor with a portion of permanent magnet material surrounding portion of the axis of rotation and including a portion that is not magnetized and a plurality of angularly spaced spoke portions that are magnetized, and ferromagnetic material positioned between the angularly spaced spoke portions of the permanent magnet material.

The prior art does not teach a spoke permanent magnet rotor assembly for a motor having a shaft supporting a spoke permanent magnet rotor with permanent magnet material having a portion continuously surrounding the axis of rotation to define a circumferential portion with a first interface surface and continuously radially extending outwardly relative to the axis of rotation to form a plurality of outwardly extending portions. The rotor assembly including ferromagnetic material positioned adjacent the outwardly extending portions of permanent magnet material and including an outer surface and a second interface surface which is inward of the outer surface and engages the first interface surface, where the first and second interface surfaces are arranged to inhibit the outward radial movement of the ferromagnetic material.

The prior art does not teach a permanent magnet rotor assembly having a single body of permanent magnet material with a circumferential portion that surrounds the axis of rotation and has a substantial portion that is not magnetized, the permanent magnet material forming a plurality of spoke portions extending radially outward from the circumferential portion with each of the spoke portions being tangentially magnetized, where a plurality of poles pieces are disposed between adjacent spoke portions and coupled to the magnetic material such that the magnetic material inhibits outward radial movement of the pole pieces, and with a core disposed within the circumferential portion.

Art Unit: 2834

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karl I.E. Tamai whose telephone number is (571) 272 - 2036.

The examiner can be normally contacted on Monday through Friday from 8:00 am to 4:00 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Darren Schuberg, can be reached at (571) 272 - 2044. The facsimile number for the Group is (571) 273 - 8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Karl I Tamai
PRIMARY PATENT EXAMINER
May 24, 2006

KARL TAMAI
PRIMARY EXAMINER
